AB700 User guide
For Windows CE 5.0

Disclaimer

Copyright©2006 ATID Co., Ltd. An Unpublished Work – All right reserved. No part of the contents of this documentation or the procedures described there in may be reproduced or transmitted in any form or by any means without prior written permission of ATID Co., Ltd. or its wholly owned subsidiaries ("ATID ").
Owners of ATID products are hereby granted a non-exclusive, revocable license to reproduce and transmit this documentation for the purchaser's own internal business purposes.
Purchaser shall not remove or alter any proprietary notices, including copyright notices, contained in this documentation and shall ensure that all notices appear on any reproductions of the documentation.
Should future revisions of this manual be published, you can acquire printed versions by contacting ATID Customer Administration. Electronic versions may either be downloadable from the ATID web site (www.atid1.com) or provided on appropriate media. If you visit our web site and would like to make comments or suggestions about this or other ATID publications, please let us know via the “Contact ATID page.

Disclaimer
Reasonable measures have been taken to ensure that the information included in this manual is complete and accurate. However, ATID reserves the right to change any specification at any time without prior notice.
ATID is a registered trademark of ATID Co., Ltd.
The ATID logo is a trademark of ATID. All other trademarks and trade names referred to herein are property of their respective owners.
AB700 is a registered trademark of ATID Co., Ltd. and of its wholly owned subsidiaries.
Microsoft Windows®, Windows® 2000, Windows® CE .NET, Windows® Embedded Handheld, Windows® NT, and Windows® XP are registered trademarks of Microsoft Corporation.

ATID Co., Ltd.
#1205, Byuksan/Gyungln Digital Valley II, #481-10,
Gasan-Dong, Gumchon-Gu, Seoul, Korea
Tel: +82-2-544-1436
Fax: +82-2-2113-0040
www.atid1.com

Table of Contents

Copyright and Agreement....5
Chapter1. Caution when using....6
1. How to use the battery correctly....6
2. Caution when using....6
Chapter2. Products compositions....7
1. Package components....7
2. Name of Each Part....8
3. Function of Each Part....9
Chapter3. Basic Functions....10
1. Power and Battery....10
1.1 Switch On Backup Battery....10
1.2 Detaching and Attaching Main Battery....11
1.3 Charging....12
1.4 Power On and Off....12
1.5 Checking Battery Gauge....14
1.6 Backup Battery....15
1.7 Dispose of Battery....15
2. System Reset....16
2.1 Soft Reset....16
2.2 Hard Reset....16
2.3 Initializing System....17
3. Using Micro SD, SIM, SAM Card....18
3.1 Installing Micro SD....18
3.2 Installing SIM Card and SAM Card....19
4. System Settings....20
4.1 Setting Brightness....20
4.2 Screen Calibration....20
4.3 Setting Volume and Sounds....21
4.4 Setting Data and Time....21
5. Using keypad....23
5.1 Using keypad....23
5.2 Inputting Data....23
5.3 Using <Fun> Button....24
6. Using stylus....24
7. Using ActiveSync Program....25
7.1 Installing Microsoft ActiveSync Program....25
7.2 Connecting PC to PDA....26
7.3 Transmitting Data....27
8. Firmware Upgrade....29
Chapter4. Optional Module....30
1. Using 1D or 2D Barcode Scanner....31
1.1 Scanning Barcode....31
1.2 Setting Barcode Emulator....32
1.3 Setting Barcode Symbology....34

1.4 Barcode Scanning Beam Position 36
2. Using Wireless LAN 37
2.1 Connecting to Wlan 37
2.2 Setting Wlan Manually 37
2.3 Checking WLAN Information 38
3. Using Bluetooth 39
3.1 Bluetooth Beginning and Closing 39
3.2 Bluetooth Pairing 42
3.3 Bixolon SPP-R200 Printer Demo 45
4. Using GPS 47
4.1 Executing GPS Demo Program 47
5. Using Camera 48
5.1 Using Camera 48
6. Using HF13.56MHz Reader 49
6.1 Executing HF13.56 Demo Program 49
6.2 Mifare Tag Window 49
6.3 ISO15693 Tag Window 50
7. Using 900MHz RFID Tag Reader 51
7.1Executing RF900Demo Program 51
8. Using Modem 52
8.1 Modem ON/OFF 52
8.2 Modem Resetting 53
Chapter5. Appendix 55
Configuration 55

Copyright and Agreement

- This manual is subject to copyright protection along with all relevant rights.
- No part of this document or the procedures described therein can be copied, reproduced, changed, translated or transmitted in any form or by any means without prior written permission of ATID Co., Ltd. or its wholly owned subsidiaries.
- ATID reserves the right to change any contents of this manual at anytime without prior notice.
- There are maybe some differences between the contents of this manual and the actual behavior of product.

This manual is written for the person who is responsible for installing, configuring, and maintaining the PDA. Read and follow all warnings and cautions in this document before you handle and operate ATID equipment

Safety Information

Read and follow all warnings and cautions in this manual before you handle and operate ATID equipment. If you do not follow the safety warnings and cautions, you might be seriously injured, and the equipment and data are also might be damaged.

Warnings!

A warning requires you must pay attention to the operating procedures, practices, conditions, and statements strictly, or might be injured seriously.

Cautions

A caution alerts you that you must be observe strictly when you operating procedure, practicing, configuring, for preventing from damage and destruction of equipment, and loss of data.

Note

A note provides you the information which you must needs while you using

Chapter1. Caution when using

Before you handle and operate your device, Please read through and familiar with the co ntents of this manual.

1. How to use the battery correctly

- When you dropped the main body or battery in water, please do not put it on the stove or heater for drying. Just keep it in natural temperature or contact with purc hase place.
- Please do not take the metal object to approach to the terminal of battery
- If you do not use the battery for a long time after charging, please keep it at room temperature.
- According to the life of battery and the processing time of its using, the buffering t ime can be shortened. In this case, please contact your dealer.
- You have to charging the device with the provided adaptor from factory.

2. Caution when using

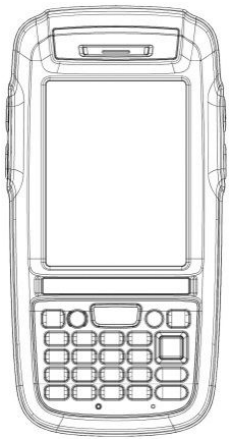
- User careless or products repair might damage the stored data. Manufacture is not responsible for this damage, so important data should be kept separately
- If you has problem, do not try to repair or disassemble the product arbitrarily, plea se contact customer service center.
- Do not use your where have electromagnetic wave or the risk may occur such as h ospital, plane so on.
- A high temperature or high humidity environment will causes trouble, Please note th at.
- Please do not using other sharp object to touch the screen, otherwise it might be get damaged or not working properly.
- Please be careful not to touch the metal paper cutting saw tooth, so as not to get injured
- If smell odors, occurs smoke or noise during use product, immediately disconnect the charger and off the power, then Please contact with customer service center
- If you have any other questions during use, please contact the customer service c enter

Chapter2. Products compositions

Mobile computer is a small, ergonomically designed PDA, which built on the Microsoft window CE 5.0 Operating System. The PDA could equip with Barcode Scanner, RFID Tag Reader, Smart Card Reader, Wireless Modem, Camera and so on devices as optional items. Its various function applied to Industry, Enterprise, Logistics and so on, can be used extensively in many fields.

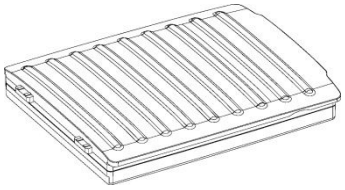
1. Package components

After opening the product packaging box, check the items listed as below:



1. AB700 Body

2. Adaptor and AC Cable



3. Main Battery

4. Leather Case
(Option)

5. USB Sync Cable

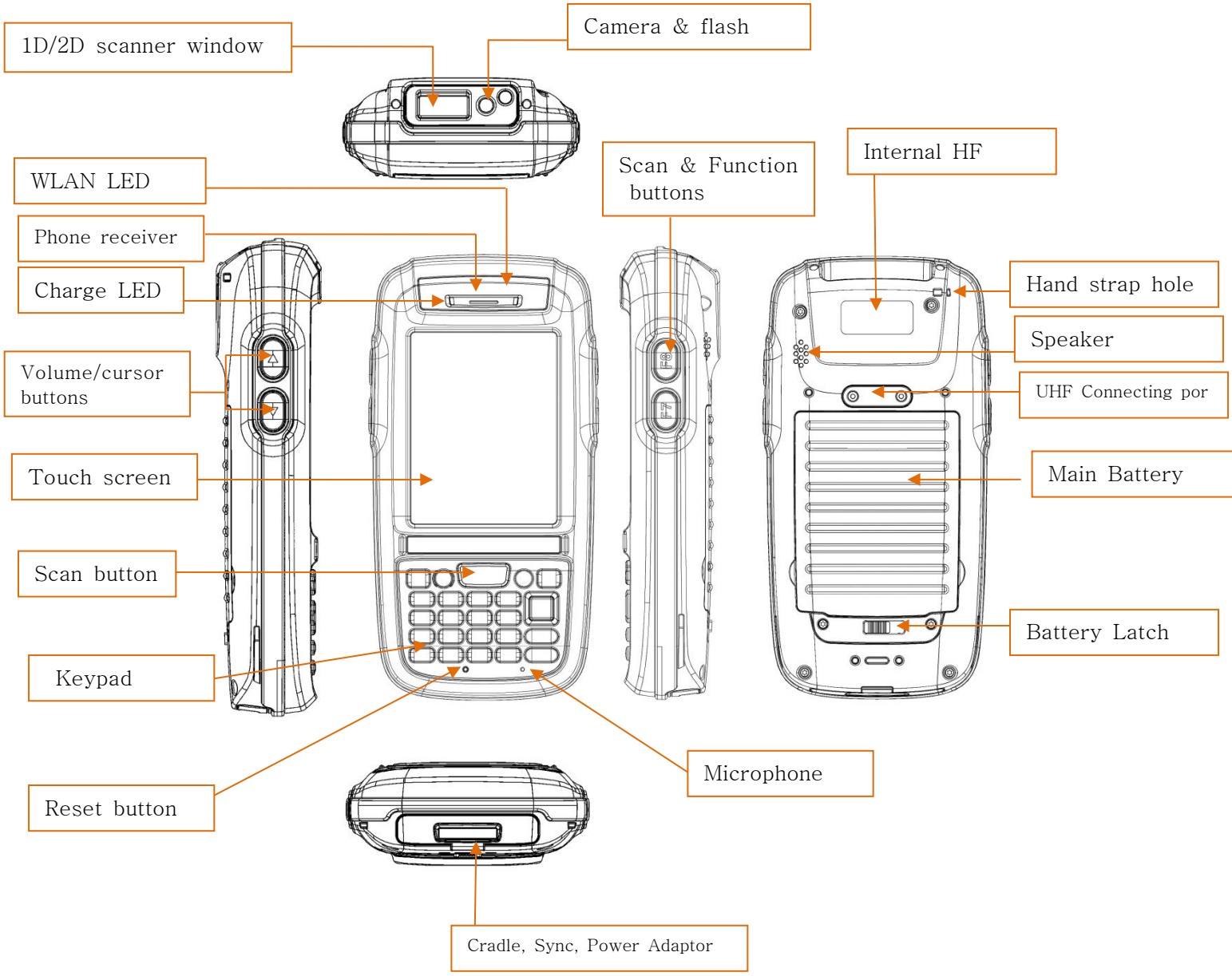
6. Protective Fil

7. Stylus

8. Hand Strap

*If there is missing or defective products on the above, please contact the customer support center or your place of purchase.

2. Name of Each Part



3. Function of Each Part

Part	Descriptions
1D/2D scanner (Option)	Laser beam emitted through this window. Please be careful the foreign substances and preventing from the damage. ◆Warning! Do not look at the laser beam directly.
UHF connection port	Enable you to install a UHF 900Mhz tag reader module.
Internal HF	HF 13.56Mhz Embedded module mounting location.
Reset Button	Enable you to perform a warm Reset, Press <Power>button simultaneously, Enable you to perform a hard Reset
Microphone	Enable you to conduct communication
WLAN(Option) LED	Displays whether the wireless WLAN power supply
Battery Latch	Enable you to detaching and attaching the main battery.
Main Battery	Enable to supply the power to the product.
Volume Buttons	Enable you to press <FNC>button simultaneously to adjusting volume.
Scan button (F7, F8)	It is possible to scan barcode or RFID tag
Scan button (F9)	It is possible to scan barcode or RFID tag
Speaker	Build-in speaker, which could emit various sound effects.
Sync Cable Connector	Enable you to connect and send data to PC via USB sync cable.
Ear Jack	Enable you to connect to earphone.
Left and right key	Can move the cursor to the left /right direction and use the up/Down arrow keys with combination <FNC> button
Power LED	Power LED will be Red when the battery is charging, or will be green when it is charged completely.
Adaptor Connecting Jack	Enable you to connect to adaptor which provided from factory.
Camera flash (option)	You can use the camera with flash
Camera (option)	It is possible to image capture and save.
Cradle Connector	Enable you to connect to PC or charging the battery while using cradle.
Key Pad	Enable you to input key value (number, alphabets, symbol), or executing assigned programs.
Touch Screen	Display running programs, and could execute, use, and exit programs via using stylus to touch the screen.
Hand strap hole	Enable you to attach a hand strap or a stylus for the convenience of using, while need to use the device for a long period time.

Chapter3. Basic Functions

1. Power and Battery

PDA battery is composed of main battery and backup battery. A main battery supplies the power to the system and RAM which could keep save the data. A backup battery could keep save the data of RAM when the main battery discharged completely.

Main Battery: 3.7V 3,000mA Lithium – ion
Backup Battery: 3.7V 105mA Lithium – polymer

- Note:
  Switch on the backup battery at first beginning of using PDA, and then install the main battery, charge it completely.

1.1 Switch On Backup Battery

The image as blow shows the battery compartment, which already removed the main battery. Slide the lever to right to start to supplying power to the system.

To attaching main battery to the back battery compartment of the PDA.

To confirm the battery latch locked firmly.
“Refer to 1.2 Battery attaching and detaching”

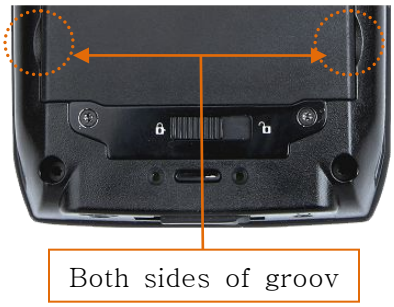
Connecting adaptor to the PDA adaptor connecting jack, and check if the “Power LED” is Red, and then charging the power completely until it get into Green.

- Note:
  If the window wallpaper has shown on the screen, press the <power> button for a couple of seconds, so that could shorten the charging times.

1.2 Detaching and Attaching Main Battery

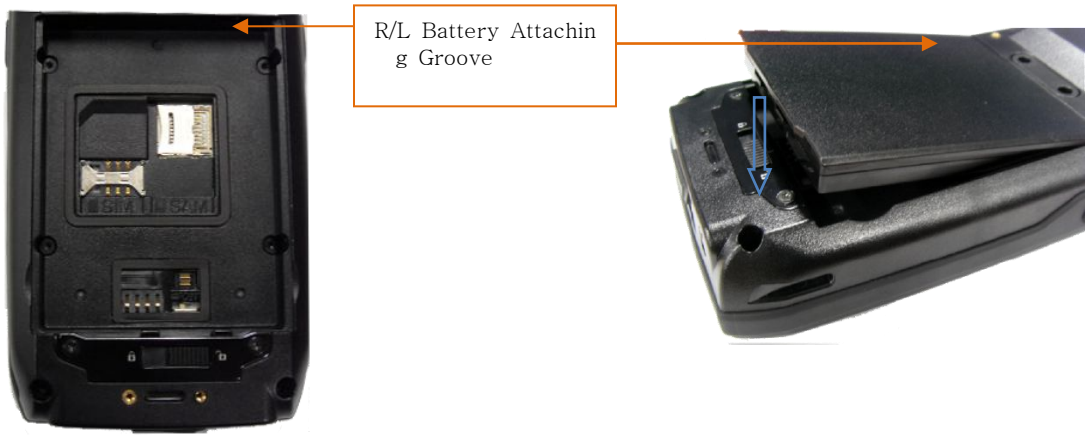
➢ Detaching Battery

These images as below, shows the back bottom of the PDA.
Slide the battery latch to the right (UNLOCK side), and then lift the main battery out of the compartment along both sides of groove.



➢ Attaching Battery

Put the top part of battery into the upward groove, and then press down the bottom of battery
into the battery compartment, slide battery latch to the left (LOCK side) to attach battery firmly.



1.3 Charging

You have to charge the battery via dedicated adapter, which provided from the factory. “Power LED” is Red while charging or is Green when charged completely.

➢ **Connecting Adapter**

1. Plug the adapter cable to 220V socket.
2. Connect adapter DC cable to the “Power connecting jack” of the main body.
3. “Power LED” is Red while charging.

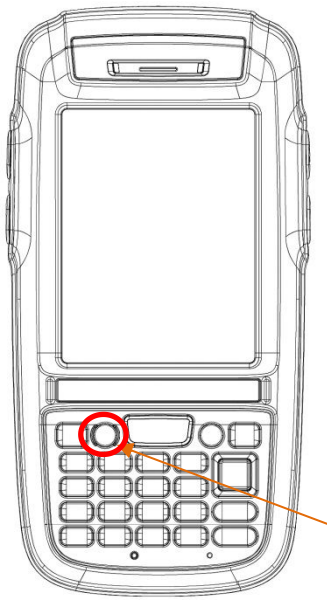
Caution:
You must to charge the battery by using dedicated adapter, which provided from factory, or your device might get damage.

1.4 Power On and Off

Press <Power> button one time, the device will enter low-Power mode (Sleep Mode) under the system is started and the following window is displayed on the desktop or other programs is running in the system. Press <Power> button once again could activate the system.

Taskbar: Display the currently running programs.
Start button: Activates the start menu and then execute a program.

➢ Power On and Off via <Power> Button



Power Off:

1. When the system is in booting status, press <Power> button for a couple of seconds, then the backlight will be turned off and enter the low-power mode (sleep mode).
2. You can also press **<Start Button> -> <Suspend>** button to turn the device off.

Power On:

1. When the system power is in the off status, press <Power> button quickly, then backlight will be turned on and start the system.
2. Connect to the ActiveSync USB cable; the power will be turned on automatically.

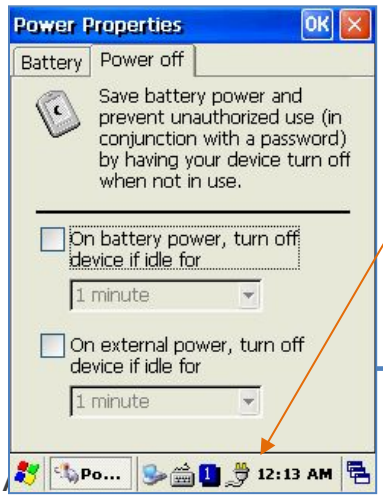
- **Note:**

Even though the power is in off state, if there was a tiny battery gauge remained, the data of RAM will be saved, and those programs which have been running for sometime before the power turned off, will be recover rapidly. If the main battery and backup battery are both in the discharge state, the RAM data will disappear, and the system will be starting if the power is charged again.

➢ Power off automatically

The device has been powered but has not been used for a period of time, then the system will enter low-power mode (sleep mode) automatically. You could set the sleep mode time at the power management so that could save power and prolog the battery life.

[Start Button] -> [Setting] -> [Control Panel] -> [Power Management] -> [Power Off]


Power Properties
OK
Battery
Power off
Save battery power and prevent unauthorized use (in conjunction with a password) by having your device turn off when not in use.
On battery power, turn off device if idle for
1 minute
On external power, turn off device if idle for
1 minute
Po...
12:13 AM

Power Icon

- You can also double click <Power> Icon to enter this interface.
- You can also press the <Power> button to activate the system, when the device turned off cause get into the sleep mode.

➢ **Battery Discharging**

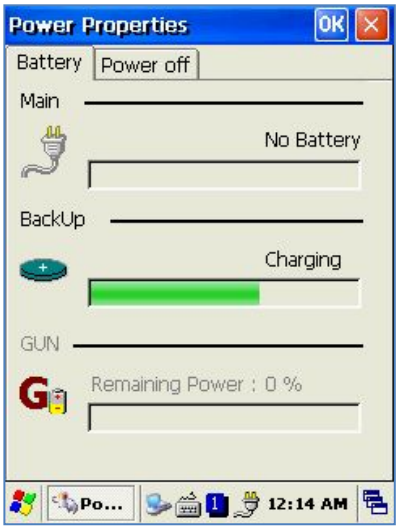
If the main battery discharge completely, the system will not turned on, the device will get into low-power mode (sleep mode) automatically, and even press the <Power> button, the system will not be turned on. In this case, you should charge the main battery or connect the adaptor to the adaptor connecting jack of main body, then press the <Power> button to turn on the system.

1.5 Checking Battery Gauge

- Note:
  Battery life is largely affected from the user using method and surrounding environments. A 2200mA battery is usually needs 6 ~ 12 hours to get charged completely.

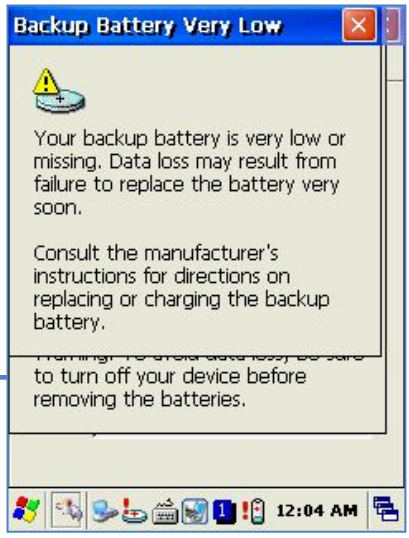
➢ **Checking Battery Gauge**

[Start Button] -> [Setting] -> [Control Panel] -> [Power Management] -> [Battery]



➢ **Low Power Warning**

If the remaining battery gauge cannot support the system running any more, a low power warning message window will be popped up on the screen. In this case, you need to press the <Power> button to turn off the power, and to charge the battery as soon as possible.


Backup Battery Very Low
Your backup battery is very low or missing. Data loss may result from failure to replace the battery very soon.
Consult the manufacturer's instructions for directions on replacing or charging the backup battery.
to turn off your device before removing the batteries.
12:04 AM

1.6 Backup Battery

A backup battery could safely keep the RAM data, even the main battery discharged com pletely.

> **Caution:**
> If the main battery and the backup battery are both discharged, the RAM date will disapp ear.
> Among the running programs, the RAM data will disappear in which are using, and the sy

1.7 Dispose of Battery

You need to purchase a new one if the battery damaged or reached its end of life.

> **Warning!**
> **Please dispose the used batteries in a designated place.**

2. System Reset

If there is no response from the system or an application is locked up and stops responding, and when you want to upgrade the firmware, reset the system is maybe necessary.

2.1 Soft Reset

When do you need to perform Soft Reset?

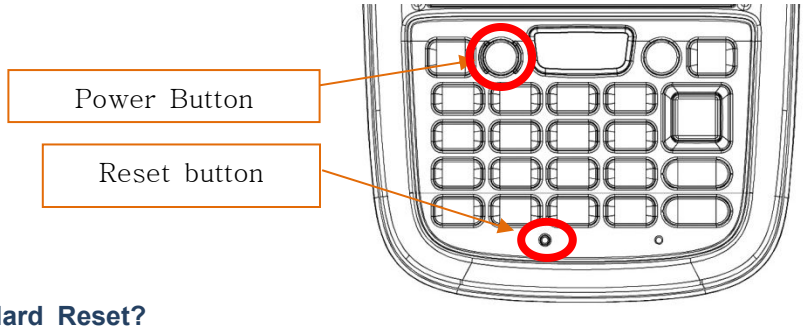
If there is no response for your command from the system, it calls (Hang-up). In this case, you need to perform a soft reset. Soft reset will end programs and the user memory region will be deleted, but installed programs and data, and so on, are not affected.

[Soft Reset Procedure]

Using the stylus pen to press <Reset> button briefly, the system will restarting again, after the screen turns off shortly.

[Soft Reset Result]

- System will be restarting.
- Operating System will be restarting (Windows CE).
- Desktop will appear in about ten seconds.
  - User's changed registry information, copied files and Installed programs will be restored.



2.2 Hard Reset

When do you need to perform Hard Reset?

Hard Reset, which is also called **Cold Reset**, enables to initialize hardware completely. User's installed programs, copied files and registry values will keep remained even performed Hard Reset, but the real time and date will be initialized. So you need to reset the time and date after performed Hard Reset.
You need perform Hard Reset when the Soft Reset cannot restore the system.

[Hard Reset Procedure]

Using stylus pen to Press <Power> Button and <Reset> Button simultaneously, the system will restarting again after the screen turns off shortly.

[Hard Reset Result]

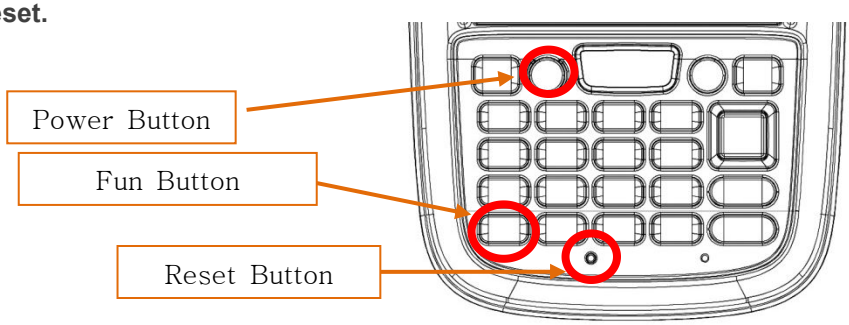
- System will be restarting.
- Operating System (Windows CE) will be loading and restarting.
- Desktop will appear in about ten seconds.
- Time and date window will be popped up and need to reset it.

2.3 Initializing System

Enter [Boot Menu] and do what you want, when in the situations as below:

1. When you need to restore the original registry information, which has been changed.
2. When you need to initialize “My device” storage spaces.
3. When you need to initialize “Flash Disk” storage spaces.
4. When you need to initialize system to factory default settings.

You can also press <Power> button and <Fun> button simultaneously, and then press <Rese t> button to perform **Hard Reset.**



[Boot Menu] window would appear in a couple of seconds.

Warning!
Except for [Clean System], please do not use other functions.
The system might be work not properly if you use other functions on the [Boot Menu].

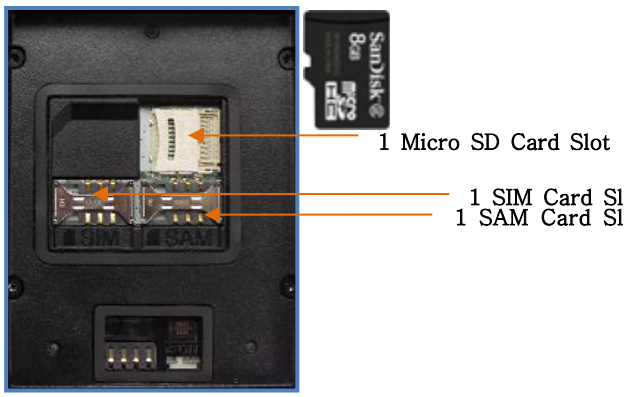
[Boot Menu]
0. Firmware Upgrade 1. Clean(Without Flash) 2. Clean(With Flash) 3. Exit
Menu Select : Enter No.

[Boot Menu] Start-up Screen

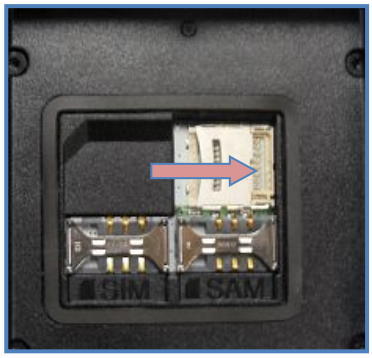
- Firmware Upgrade
  It is for the image (BOOT, OS) update by SD Card
- Clean(Without Flash)
  My Device and Registry area recover as shipped
- Clean(With Flash)
  My Device, Registry and Flash Disk area recover as shipped
- Exit
  Finish the Boot Menu

3. Using Micro SD, SIM, SAM Card

The image as below is battery compartment of , and there are 1EA SIM Card Slot, 1EA SAM Card Slot and 1EA Micro SD Card Slot.



3.1 Installing Micro SD



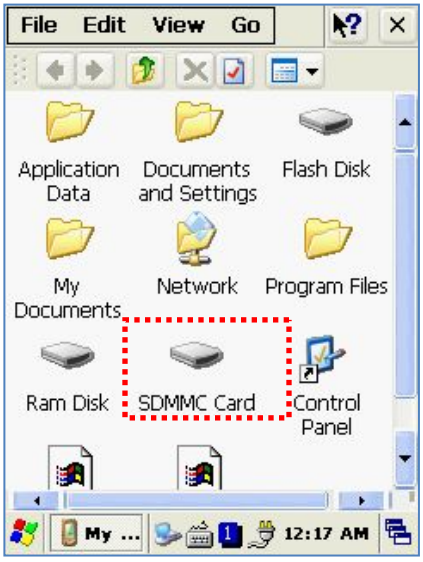
Push the cover to the right along arrow direction to open it.

lift the cover up along arrow direction.

Put Micro SD card into Slot and press down the cover as arrow direction.

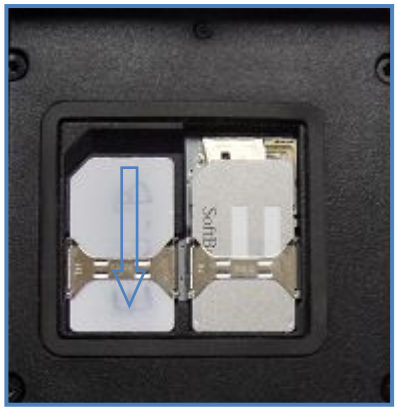
Push the cover up as arrow direction to lock it, and attach the main battery and turn on the power.

You can find the Micro SD Memory Card icon when executing the file explorer, after inserted the Micro SD card.



3.2 Installing SIM Card and SAM Card

SIM Card and SAM Card can easily insert and pull out along arrow direction.



4. System Settings

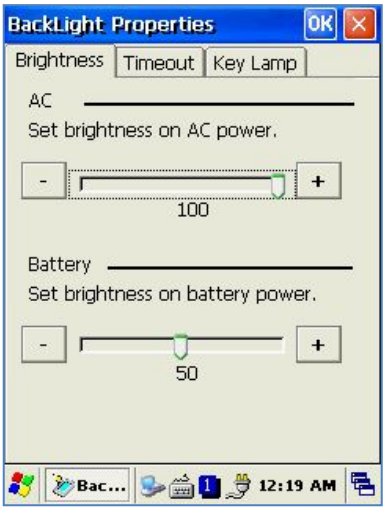
4.1 Setting Brightness

Brightness is already set 80% at the factory, and brightness is the biggest consume part of the power, so you might need to adjust it to your actual need.

[Setting Brightness]

1. [Start Button] -> [Setting] -> [Control Panel] -> [Backlight]
2. [MyDevice] -> [Control Panel] -> [Brightness]

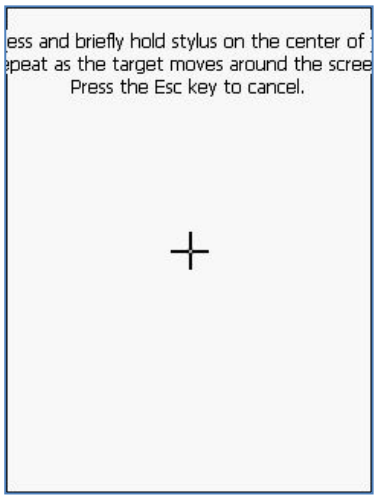
밝기: Enable you to adjust brightness.
끄기: Enable you to adjust the timing of turning off brightness.
키램프: Enable you to adjust the timing of turning off key lamp.



4.2 Screen Calibration

At first beginning of using the device after purchasing or need to use the device for a long period time, if you cannot select the place where you touched with stylus, you need to reset the coordinate calibration values.

Touch screen calibration
[Start Button] -> [Setting] -> [Control Panel] -> [Stylus] -> [Calibration] -> [Recalibration]



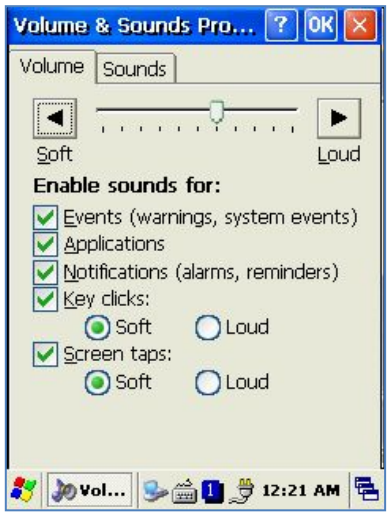
Press and hold stylus pen briefly on the center of cross symbol, and repeat 5 times as

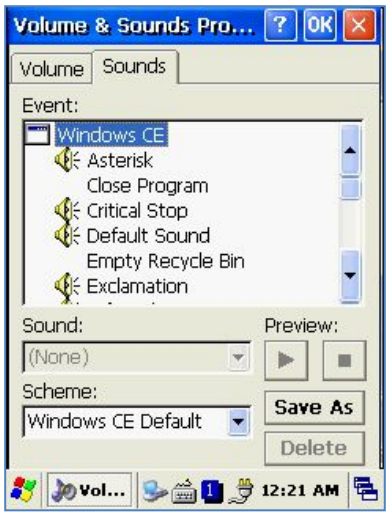
it moves around the screen. The screen counts 30 seconds after calibrating, and you ca n finish the recalibration to touch screen wherever you want, if you do not any action, t he screen will automatically finish the recalibration of itself.

4.3 Setting Volume and Sounds

Volumes is already set 80% at the factory, and you can readjust you need volume at control panel ->"Volume and Sounds"

Setting Volume and Sounds
[Start Button] –> [Setting] -> [Control Panel] -> [Volume and Sounds]





4.4 Setting Data and Time

[Start Button] -> [Setting] -> [Control Panel] -> [Date and Time]

Date/Time Properties
Date/Time
January 2011
S M T W T F S
26 27 28 29 30 31 1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31 1 2 3 4 5
12:22:12 AM
Time Zone
(GMT-08:00) Pacific Time (US & Car
Automatically adjust clock for daylight saving
Apply
Dat...
12:21 AM

Setting Year:
Double Click the year, and click the up and down arrow button to set year.

Setting Month:
Double Click the Month or Click L/R arrow button to set Month.

Setting Day:
Click the day directly to set day.

Setting Time:
Click AM/PM, Time area directly, using up and down arrow button to set Time.

Setting Time Zone:
Click up and down arrow direction to select time zone and click apply button.

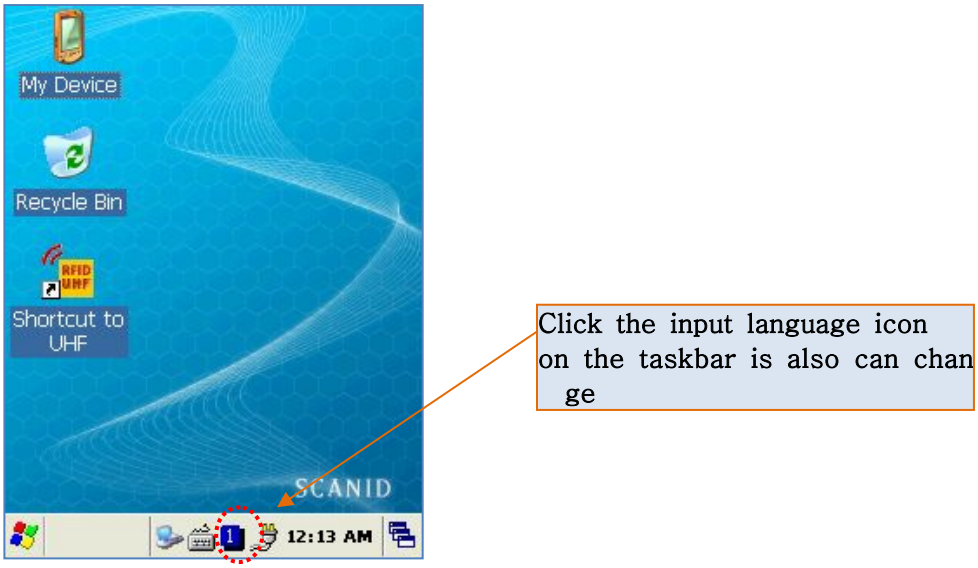
5. Using keypad

Keypad enables you to input numbers, alphabets and special symbols. And can also execute other set function with <Fun> button.

5.1 Using keypad

When you change the current input language, please press <1<=>ALP> button.

[Number] -> [Lowercase alphabetic characters] -> [Uppercase alphabetic characters] Order transition.



5.2 Inputting Data

Numeric Keypad Mode: Press<1<=>ALP> button or keypad icon on the taskbar to change to the numeric mode and directly press number on the keypad.

Alphabet Keypad Mode: Press <1<=>ALP> button or keypad icon on the taskbar to change to the Lowercase or Uppercase and directly press alphabets or special symbols on the keypad. Each button has 2 ~ 3 letters or symbols. Press the button once, the first letter or symbol will be inputted, press twice continuously, then the second letter or symbol will be inputted, and the third letter or symbol need to press button three times continuously.

5.3 Using <Fun> Button

Press <Fun> button and other buttons simultaneously can activate functions as below:

Fun + button	Descriptions
<Left>, <Light> Cursor Key On the Keypad & Left Side <Up>, <Down>	Increase or decrease the sound.
<Up>, <Down> Cursor Key on the Keypad	Perform Page Up or Page Down.
<1> ~ <9>	Perform F1 ~ F9 Function Key
<Back Space>	Delete a letter which located after the cursor.
<.>,<0>,<_>	Enable you to input <+> <000> < – > symbols.

6. Using stylus

You can tie the stylus to the hand strap hole, so that enable you to use the stylus as like a mouse on a PC

.

Use Stylus to:

- Select a letter on the soft keypad.
- Select a program on the desktop or taskbar.
- Select button, zone or tab bar in a window box or program.

Caution:

Please do not use sharp objects on the touch screen. Use only supplied stylus, otherwise would bring seriously damage to the touch screen.

7. Using ActiveSync Program

ActiveSync program could synchronize between the PC and PDA device, so that enable you to perform program installing, copy, transition, delete and so on operations.

7.1 Installing Microsoft ActiveSync Program

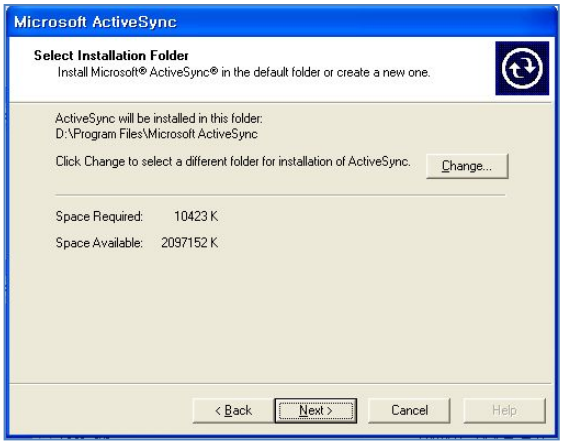
Download the latest version of ActiveSync program from Microsoft **Windows CE.** Website, and install it to your PC.

ActiveSync: Windows XP
Download Address: http://www.microsoft.com/downloads/.

Caution:
You must use ActiveSync v3.7 version or above.

Microsoft ActiveSync
Set Up Microsoft® ActiveSync® 3.7
Before you can exchange information between your mobile device and this computer, you must set up ActiveSync.
This setup wizard will guide you through:
Installing the ActiveSync program on this computer
Setting up your mobile device
Note: It is strongly recommended that you exit all Windows programs before continuing with this setup wizard.
Click Next to continue with the setup process. Click Cancel to quit setup.
< Back
Next >
Cancel
Help

Click [Next] Button.


Microsoft ActiveSync
Select Installation Folder
Install Microsoft® ActiveSync® in the default folder or create a new one.
ActiveSync will be installed in this folder:
D:\Program Files\Microsoft ActiveSync
Click Change to select a different folder for installation of ActiveSync.
Change...
Space Required: 10423 K
Space Available: 2097152 K
< Back
Next >
Cancel
Help

Designate installation folder, then click < Next> button.

Get Connected
Get Connected
After installing batteries or plugging in the AC adapter, do one of the following:
* Use the serial cable to connect to a COM port on the back of this desktop computer and click Next.
* Use the USB cable to connect to the USB port on the back of this desktop computer. ActiveSync will automatically detect the device connection.
You can also connect your mobile device using infrared (IR). For more information, click Help.
< 뒤로(B)
다음(N) >
취소
도움말

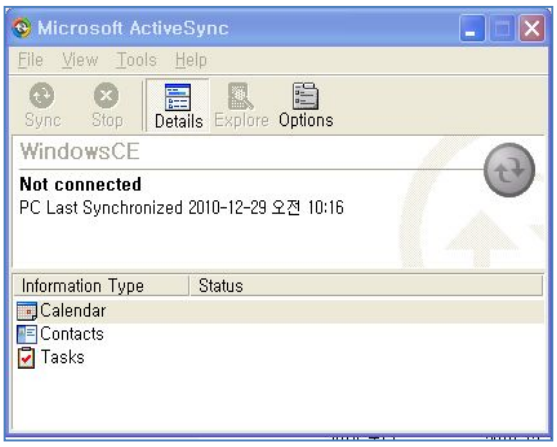
The installation was finished, and then uses the USB cable to connect to the USB port on the computer; ActiveSync will automatically detect the device connection.

7.2 Connecting PC to PDA

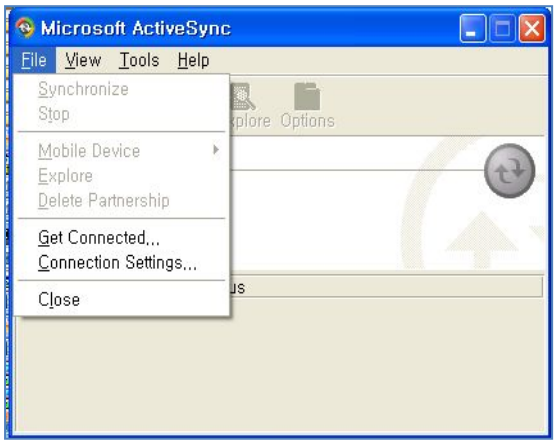
Setting PC

[Start button] -> [Programs] -> [Microsoft ActiveSync]

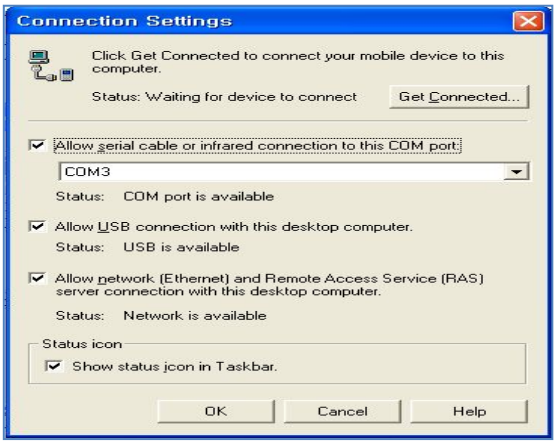
< Windows XP >



Executing Microsoft ActiveSync program



Click [File], Click [Get Connected].


Connection Settings
Click Get Connected to connect your mobile device to this computer.
Status: Waiting for device to connect
Get Connected...
Allow serial cable or infrared connection to this COM port
COM3
Status: COM port is available
Allow USB connection with this desktop computer.
Status: USB is available
Allow network (Ethernet) and Remote Access Service (RAS) server connection with this desktop computer.
Status: Network is available
Status icon
Show status icon in Taskbar.
OK
Cancel
Help

Select <Allow USB connection with this desktop computer>, press OK button.

ActiveSync connected to PDA

Setting PDA

[Start Button] -> [Setting] -> [Control Panel] -> [PC Connection]

Double click PC Connection ico

To check if set to connected t o USB Sync cable

7.3 Transmitting Data

Using the USB cable to connect PC and the device.

Connecting state

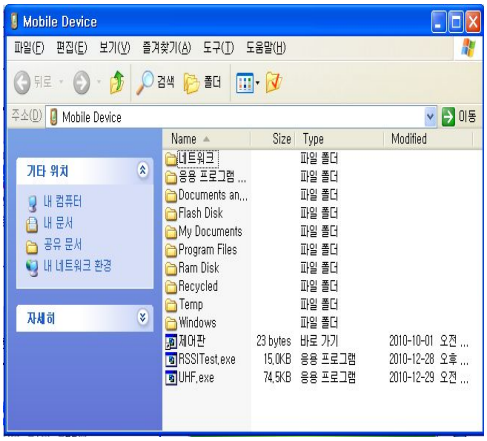
Disconnecting state

You can check the ActiveSync connecting state on the taskbar.

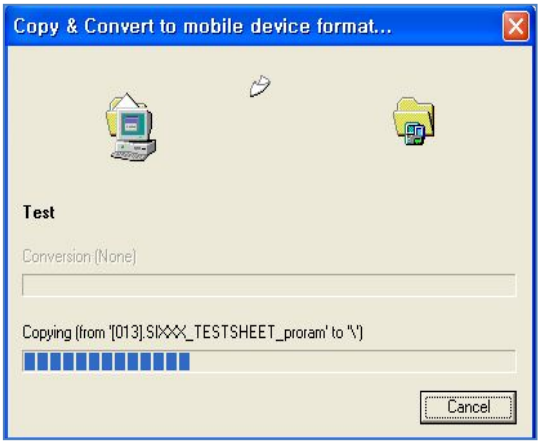
< Windows XP >

Start button/Programs/Microsoft ActiveSyn c

After ActiveSync connected, click Explore button.



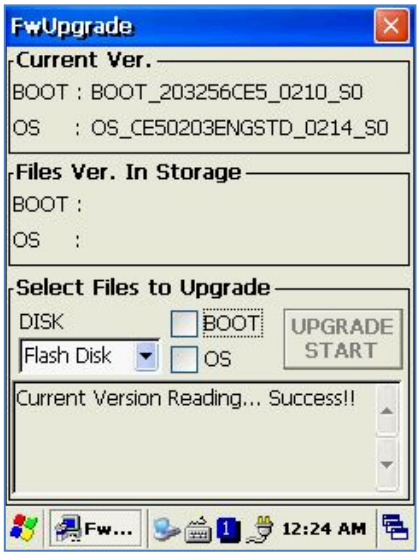
Designate transmitting file path.



Transmitting files.

8. Firmware Upgrade

[Start Button] -> [Setting] -> [Control Panel] -> [Firmware Upgrade]



Chapter4. Optional Module

Provided variety of optional modules and in this chapter will provide you the information of e ach module.

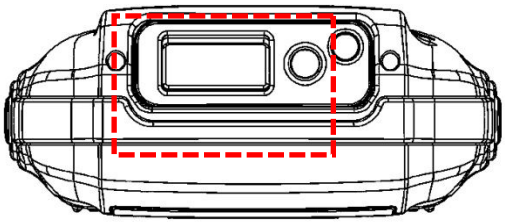
Optional modules as below:

1. **Barcode Scanner**
   -. 1D Laser Barcode Scanner
   -. 2D Imager Barcode Scanner
2. **Wireless LAN – 802.11 a/ b/g**
3. **Bluetooth**
4. **GPS**
5. **Camera**
6. **HF13.56 Reader**
7. **UHF 900MHz Tag Reader**
   - **EPC Gen 2, ISO/IEC 18000 6B**

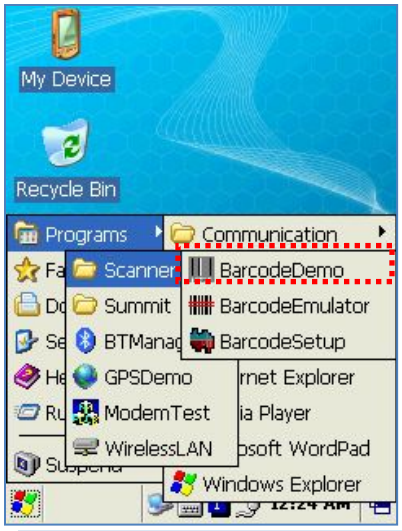
8. **Modem**

1. Using 1D or 2D Barcode Scanner

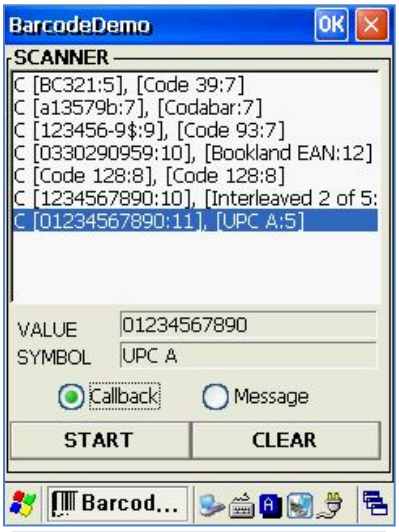
Enable to equip with a compact image engine, which could recognize all the 1D and 2D bar codes.



1.1 Scanning Barcode



Start Button/Programs/Demo Apps/Scanner/BarcodeDemo



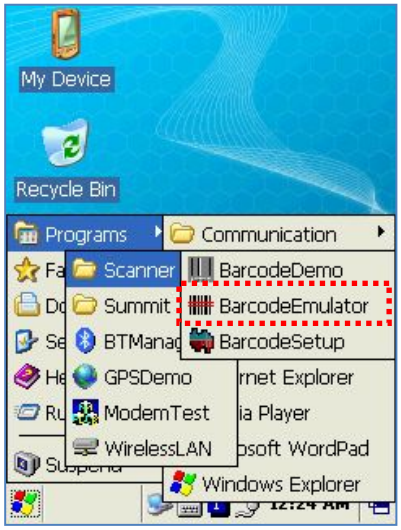
Press Scan Buttons to Read Barcode.

1.2 Setting Barcode Emulator

Barcode Emulator program enables you to set the barcode value input type, scan button, sc an sound and so on.

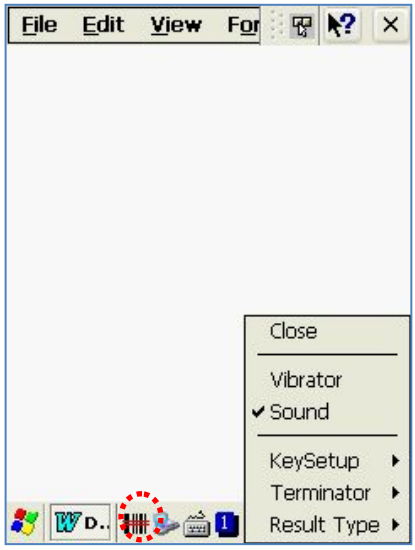
Executing Barcode Emulator

[Start Button] -> [Programs] -> [Scanner] -> [BarcodeEmulator]

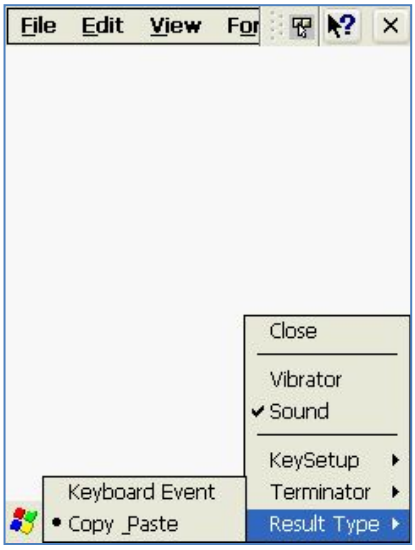


Run the Barcode Emulator

Barcode Emulator Icon will b e showed on the taskbar.



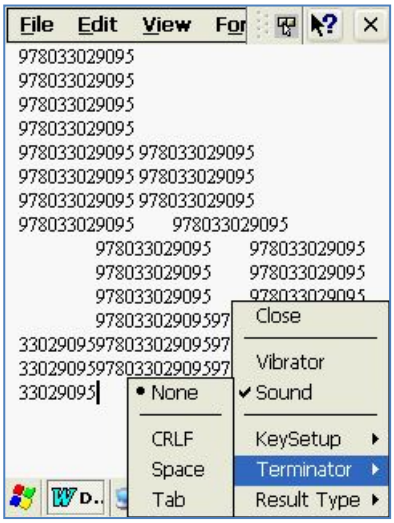
Run WordPad Program, then click the Emulator Icon



Result Type

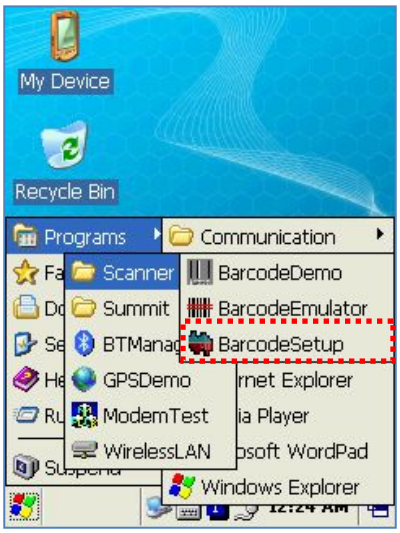
Keyboard Event: Barcode inputted o ne by one.

Copy Paste: Barcode will be stored be stored in clipboard and shown at paste way.

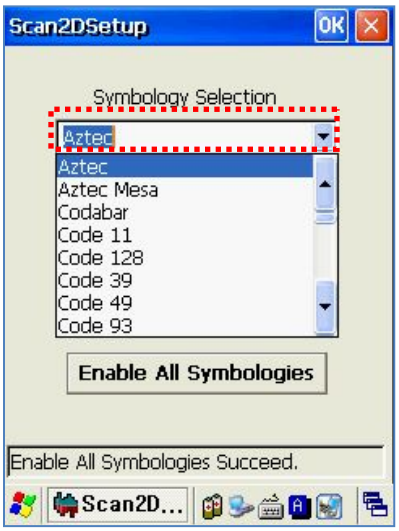

File Edit View For
978033029095
978033029095
978033029095
978033029095
978033029095 978033029095
978033029095 978033029095
978033029095

1.3 Setting Barcode Symbology

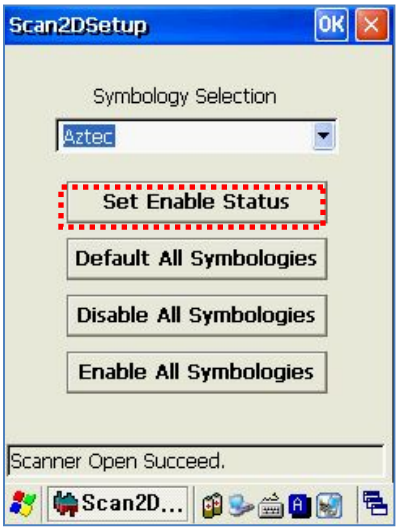
[Start Button] -> [Program] -> [Scanner] -> [BarcodeSetup]



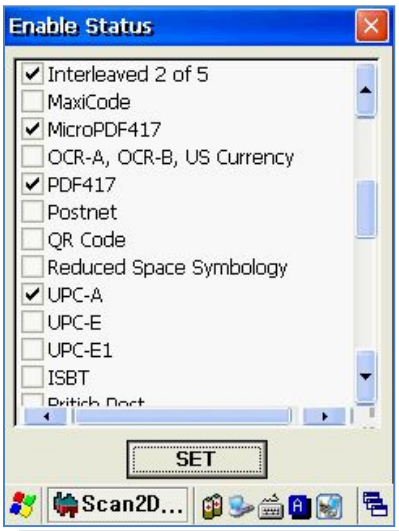
Run BarcodeSetup Program.



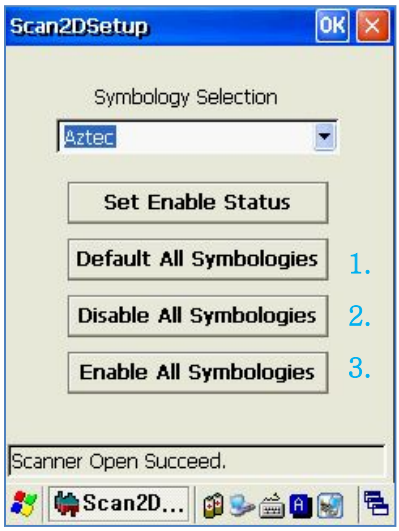
Set Barcode Type in detail.



Click Set Enable Status button

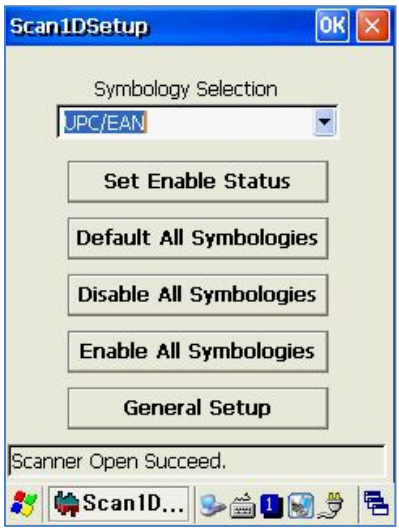


Make a check mark on the barcode which you want to use, and then click <SET> button.



2D Symbology Selection:

1. Initialize all the symbologies t o factory default value.
2. Unable to read all the symbol ogies.
3. Enable to read all the symbol ogies.



1D Symbology selection:

1. Initialize all the symbologies to factory default value.
2. Unable to read all the symbolo gies.
3. Enable to read all the symbolo gies.
4. Set a level that enable to read more than two symbologies si multaneously.

■ Warning!

Please do not look directly into the laser beam of barcode, or it may do harm to your vision.

1.4 Barcode Scanning Beam Position

1. Remove the protective film from the window of barcode.
2. Executing the **BarcodeDemo** program.
3. Emit laser beam to the barcode.
   - Adjust the distance according to the size of barcode.
   - Barcode will stop automatically in five minutes if out of the Barcode reading range.

[Correct Scanning Beam Position]

1. The more small size of barcode, needs the more close to barcode. The effective scanning rang of is from 40 ~ 300mm. if failed to scan barcode, please try to adjust scan angle and distance.
2. The laser beam is a red thick line, when scanning a barcode.

1D

2D

[Incorrect Scanning Beam Position]

1. The laser beam must across the barcode.
2. It will couldn't scan barcode if the laser beam across only a fraction of barcode.

1D

Incorrect Scanning Positions
Positioned too far to the right. Will not read entire bar code.
Too angled; entire
cannot read the bar code.
Bar code will not read. The scanner should be positioned perpendicular to the bar code bars.

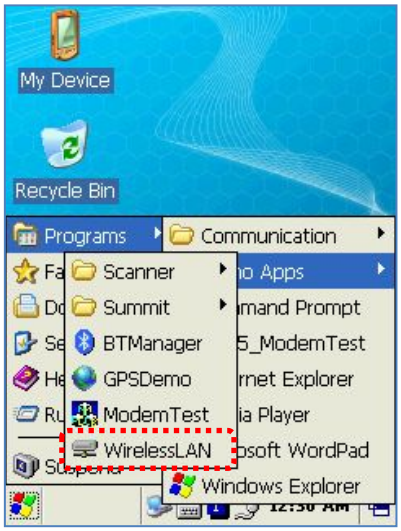
2D

2. Using Wireless LAN

enable to equip an internal 802.11 radio module to transfer data and do wireless communication. supports TCP/IP network protocol, and communicate with a host computer directly.

2.1 Connecting to Wlan

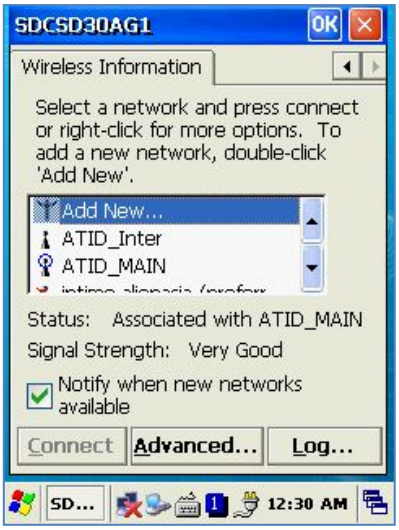
[Start Button] -> [Programs] -> [Demo Apps] -> [Wireless Lan]



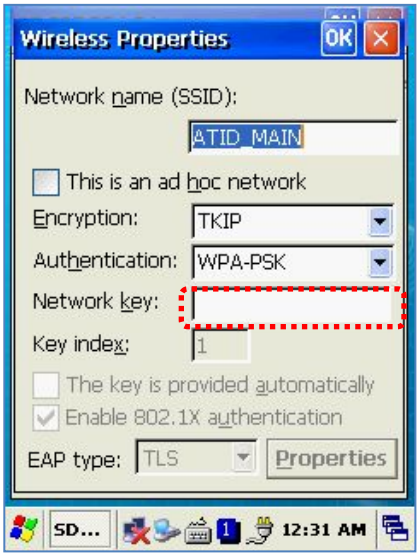
Run the Wireless LAN progr am.

Select <WLAN ON>, and the n click Ok button.

2.2 Setting Wlan Manually



Double click a suitable device from the list of AP.



Input Key Password, and the n click OK button.

2.3 Checking WLAN Information

Double click WLAN icon on the taskbar to check Wlan information.

Start Button/Programs/ATID App/Wireless Lan, and then select <WLAN OFF> to stop Wlan communication.

- Note:
  The Wlan LED will changed to green and the Wlan icon on the taskbar will be lighted on if failed the Wlan icon will be light off

3. Using Bluetooth

This User Guide is only applied to the AB700x PDA which installed "MD6RF" module.

AB700X PDA not only supports to the SPP printer device like as AT870/AT570, but also sup ports Bluetooth Stack Service of Windows CE. This User Guide described how to Pairing an d Disconnecting between AB700x and Bluetooth devices, and also described basic testing me thod of Mobile Printer SPR-R203, which launched by Bixolon, as a sample device.

** AB700x could pairing with maximum 6ea devices, but assign COM Port only to COM2 an d COM4.

3.1 Bluetooth Beginning and Closing

AB700x is using Stack of Windows basically, only could control the power of Bluetooth Modul e's ON/OFF.

1. Bluetooth Function Beginning

   A. Executing the "Bluetooth" demo program.
   WinCE Start->Programs->Demo Apps->Bluetooth.

B. Select “Bluetooth ON” item, then press OK button.

C. After Bluetooth executed, the Bluetooth BTPAN1 icon will be appeared on the b ottom of Windows Taskbar, and the red cross mark on it shows that you access is available and prepared to be accessed.

2. Bluetooth Function Closing

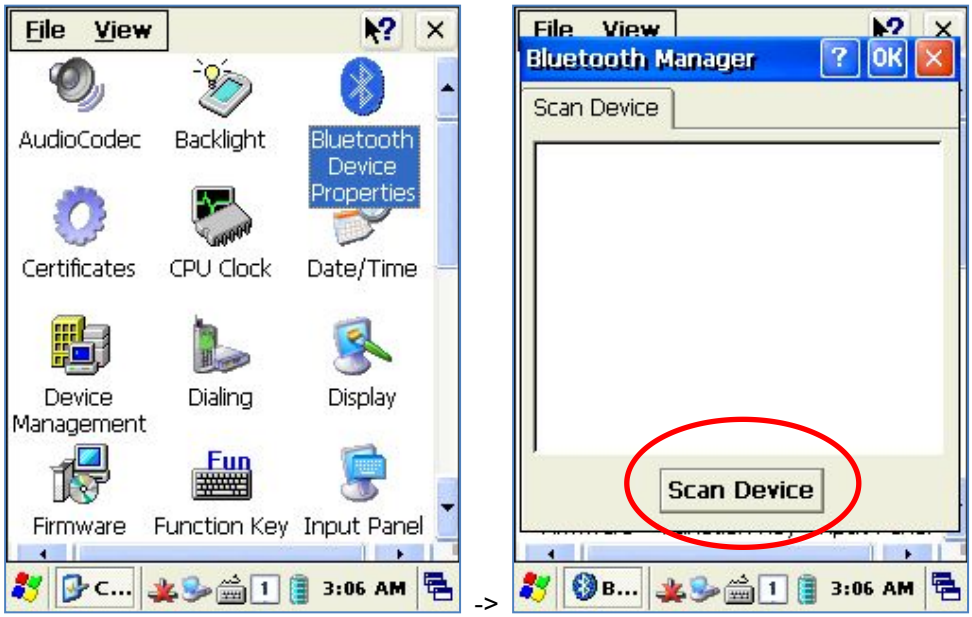
A. Executing “Bluetooth” demo App from Windows CE Menu.

B. Select “Bluetooth OFF”, then to press OK button to off the Bluetooth power.

3.2 Bluetooth Pairing

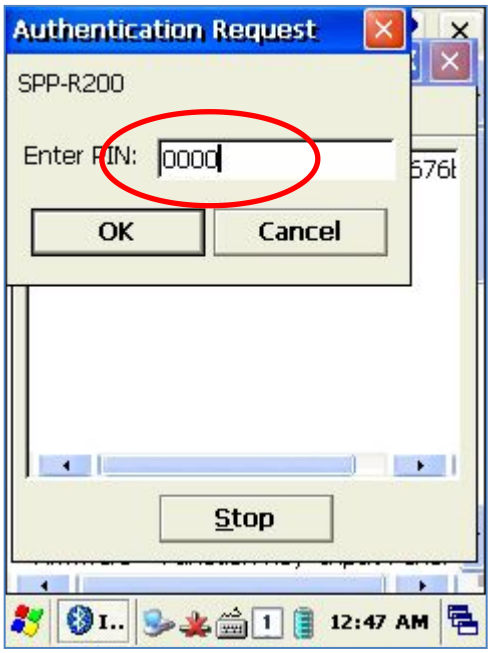
After connecting each other through pairing way, Bluetooth devices could do its function properly.

1. Executing Bluetooth program as below path.
   Start->Settings->Control Panel->Bluetooth Device Properties



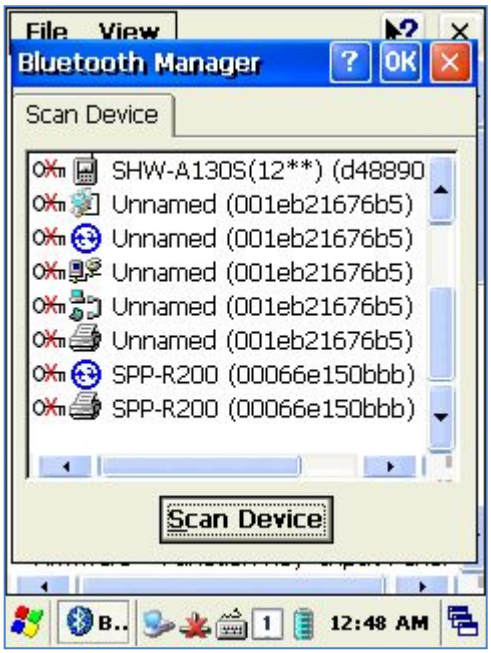
2. Press “Scan Device” button to searching devices which could pairing.

3. Depending on the situation, maybe need to input password for some devices, then c ould search devices continually.



** According to the devices need, some devices have to input Pin Code (password) f irstly.
** SPP-R200 printer factory setting Pin Code is “0000”.

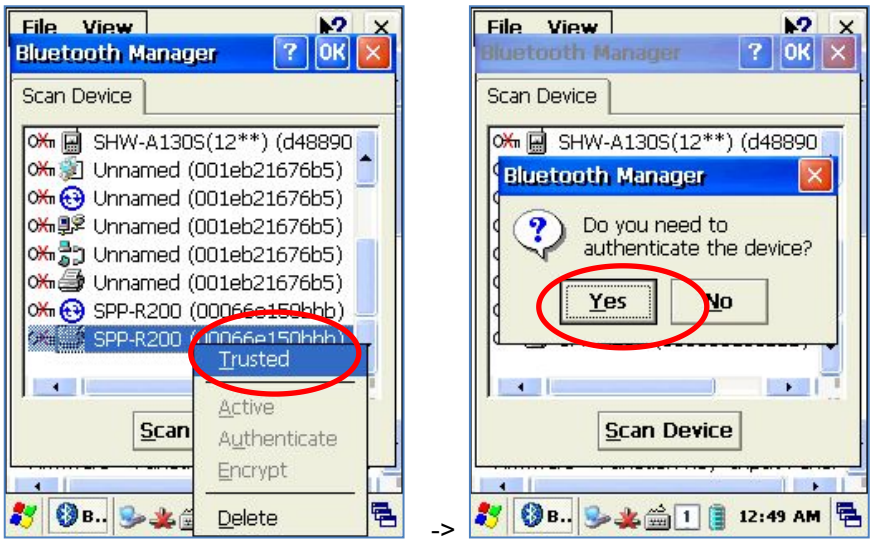
4. The devices which can connect will be listed, after finished searching.

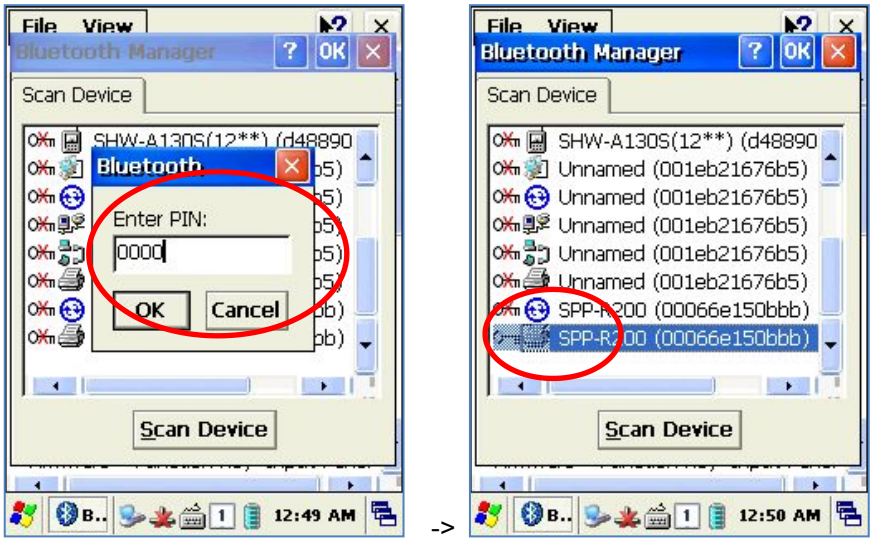


** If cannot find your need device, please press “Scan Device” button to searching y

our device again.

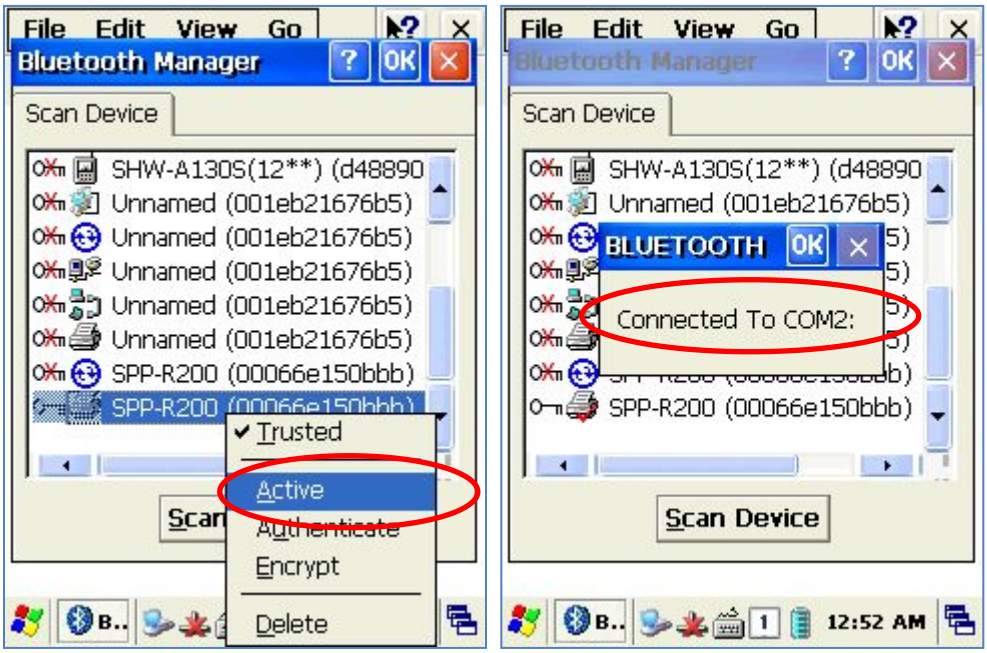
5. Double click your device name, click “Trusted” Tab to add the device to the pairing it ems, then click “Yes” button to ending the Bluetooth Manager.





* You can set the Password (Authentication code) according to the each device.
* The Red Cross mark(X) on the Key icon will disappear if finished to registration.

6. Click “Active” button to active the paired device.

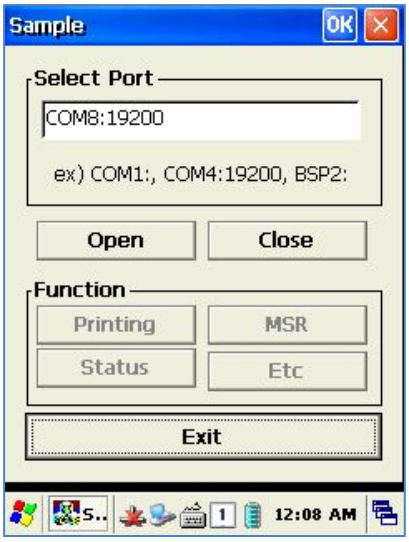


7. Then, you can perform the data communication through COM2 Port.
8. After pairing and active the Bluetooth device, you can use the Device driver, S/W, a nd SDK, which provided from the Bluetooth device manufacturer, to perform the relev ant Bluetooth function.

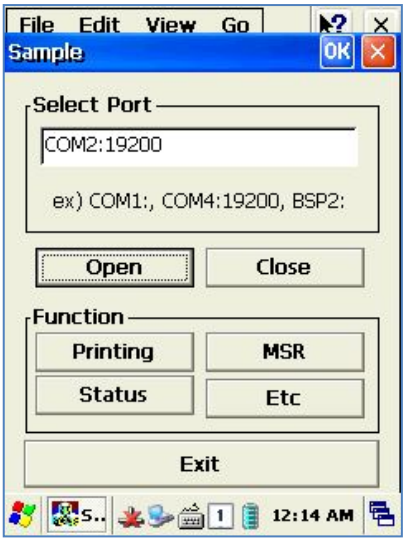
3.3 Bixolon SPP-R200 Printer Demo

SPP-R200 is typical Mobile Printer of the Bixolon, you can using its App which get fr om Bixolon website to perform print through Bluetooth.
**the Printer program and SDK, which described in this User Guide is based on the 5th Aug, 2011, and it’s would be a little different from homepage contents according t o the Bixolon policy.

1. Download “SPP-R200 Windows SDK” from the Bixolon homepage (www.bixolon.com) to a suitable directory and unzip the file.
2. Bluetooth Power ON.
3. Executing “Bluetooth Device Properties” programs which located in Control Panel.
4. SPP-R200 printer power ON.
5. Setting the SPP-R200 printer to be in the status of pairing. (Please refer to the User Guide of SPP-R200 Printer)
6. Press “Scan Device” button to searching printer device nearby.
7. In the status of pairing, the factory setting password is “0000” usually.
8. If connected successfully, “COM2 port connected” message will be confirmed. (If had connected one time, maybe not show the message.)
9. Copy and paste the DLL and executable file, which located at bin₩ce5₩MobileComp ia_M3Plus₩ within the printer SDK, to AB700x Flash Disk.
10. Executing the Sample.exe program in the AB700X Flash Disk.



11. Change the COM8 to COM2, then press “Open” button to testing printer.



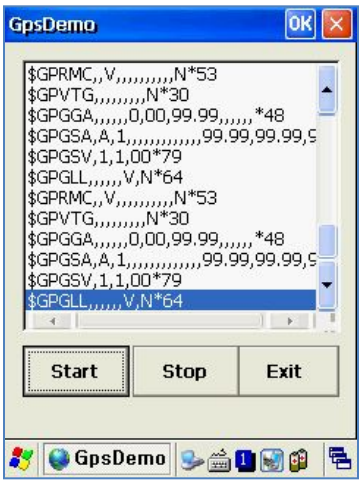
4. Using GPS

GPS Module designed to be installed on the back top of the AB700.
COM: 6 Baud rate: 9600

4.1 Executing GPS Demo Program

[Start Button] -> [Program] -> [DEMO Apps] ->[GPS-Demo]

Execute GPSDemo Program.



Start: Start to receiving GPS data
Stop: Stop to receiving GPS Data
Exit: Exit the GPS Demo program

Confirmation of GPS receiving data:

1. Finding an open place to check your GPS signals.
2. According to the actual environment, the time to receive data is different (about 3~10min) , After receiving GPS data once, it is faster to receive GPS data than the first attempt.

5. Using Camera

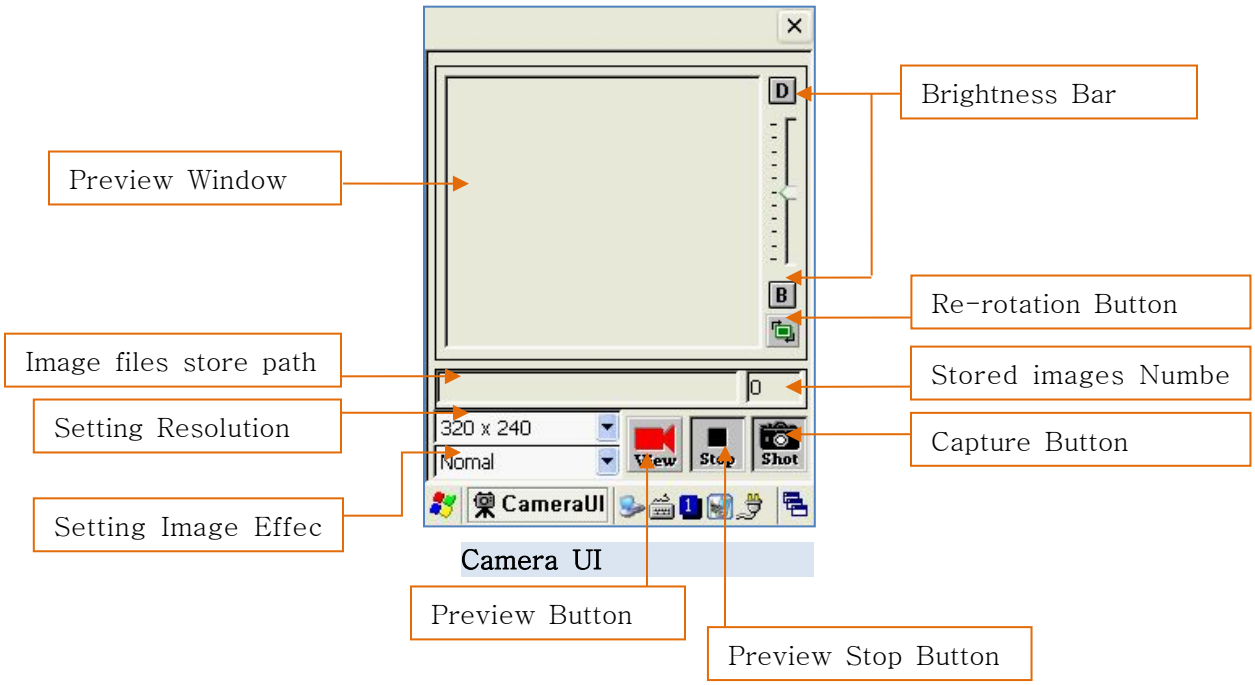
AB700 can equip with a 3.0 megapixel camera which could fixes screen brightness, adjust th e video resolution, screen capture, etc.

5.1 Using Camera

[Start Button] -> [Program] -> [DEMO Apps] -> [CameraDemo]

Execute Camera Program.

Camera's Main Screen.



Camera UI

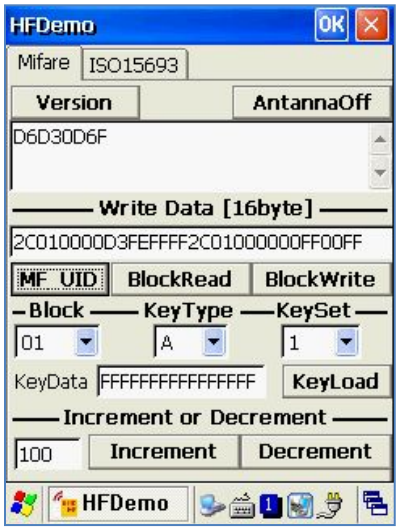
6. Using HF13.56MHz Reader

AB700 PDA enable to equip a HF13.56Mhz module as a option, and the recognition distanc e is 3-8.5cm according to the standard of ISO, in the case of Mifare Tag, it's will be 1~3.5c m.

6.1 Executing HF13.56 Demo Program

[Start Button] -> [Program] -> [DEMO Apps] -> [RF13.56Demo]

6.2 Mifare Tag Window

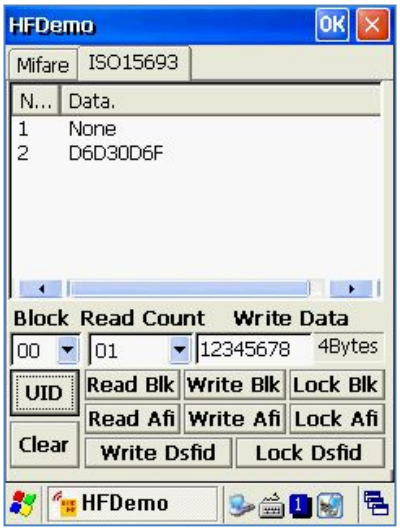


Click MF-UID button to read a Mifare Tag

Mifare:

Version: Read firmware version of ISO15693.
AntennaOff: Stop the Antenna.
MF_UID: Read Mifare Tag ID.
Block Read: Read Block Data..
Block Write: Write Block Data.
Keyload: Register authorization key to the R/W while t o access Mifare
Increment: Increase the values to data block.
Decrement: Decrease the values to data block.

6.3 ISO15693 Tag Window



Click UID button to read ISO 15693 Tag

ISO15693:

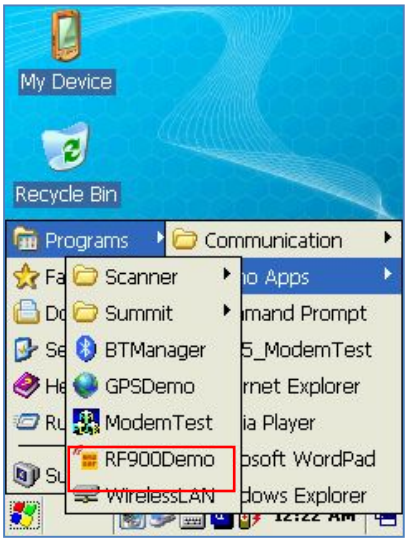
UID: Read ISO15693 Tag ID.
Read Blk: Read ISO15693 Block data.
Write Blk: Write ISO15693 Block data.

7. Using 900MHz RFID Tag Reader

Enable to equip a UHF 900Mhz Tag Reader. Enable to read and write RFID Tag w hich supported protocol of EPC GEN2. The Frequency range is 850MHz ~ 960MHz, and could adjustable.

7.1 Executing RF900Demo Program

[Start button] -> [Program] -> [DEMO Apps] -> [RF900Demo]



Run RF900Demo Program

INVENTORY Mode:

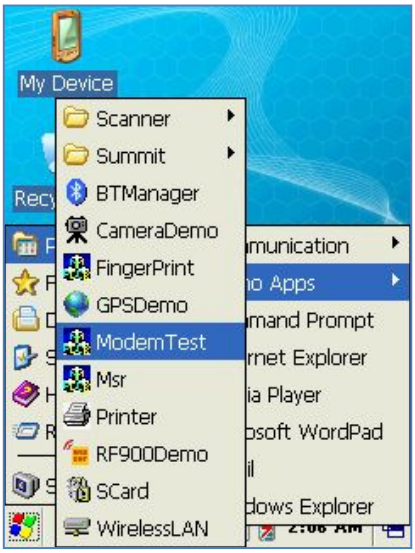
Single Read: Read one Tag each time.

Multi Read: Read multi Tag each time (Anti Collision).

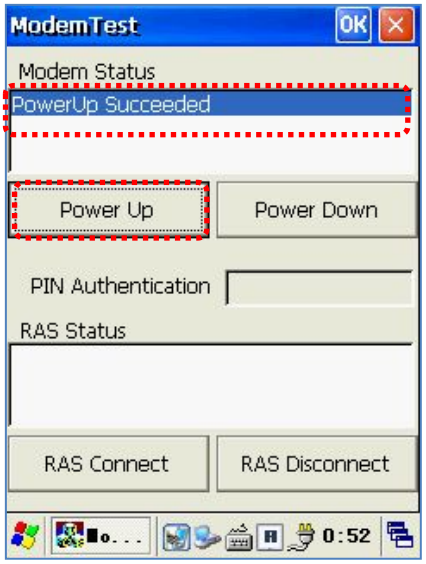
INVENTORY: Press <Inventory> button to read tags.

8. Using Modem

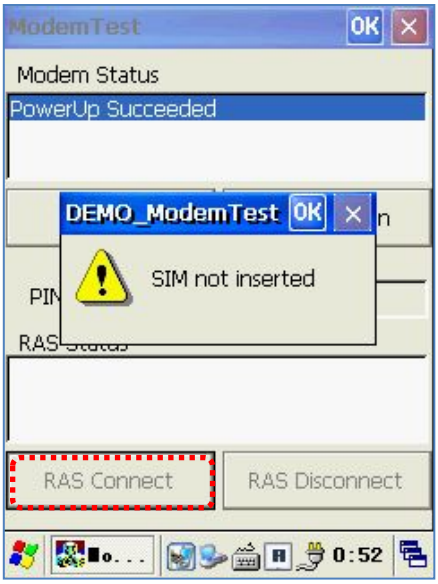
8.1 Modem ON/OFF



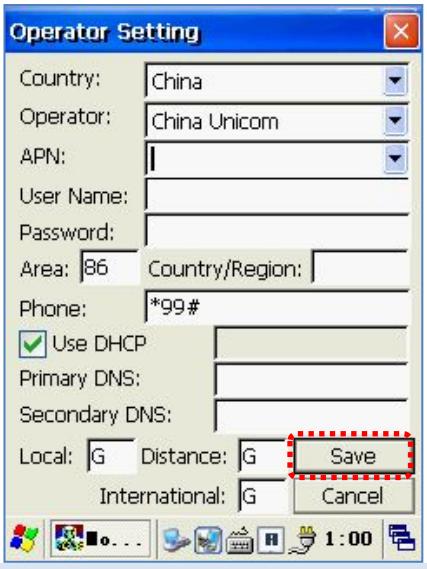
Click Start->Demo Apps -> ModemTest



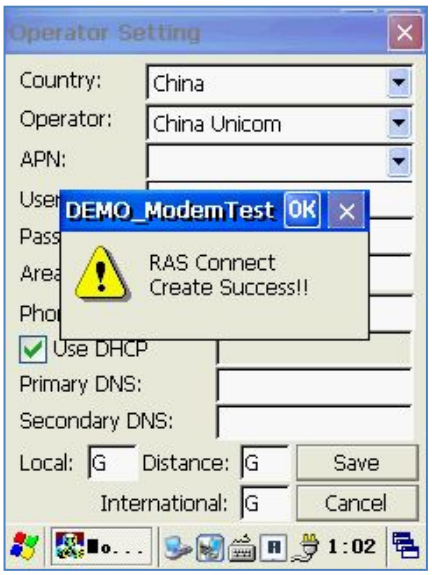
Press <Power Up> button, wati tillp owerup succeed.



Press <RAS Connect> button, if th ere is no SIM card, the prompt messege window will pop up.



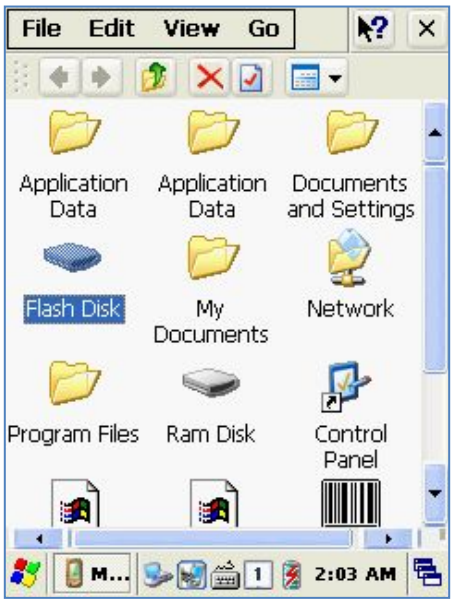
If there is the SIM card, then setti ng each item on the Operator Se tting interface, and press <Save> button



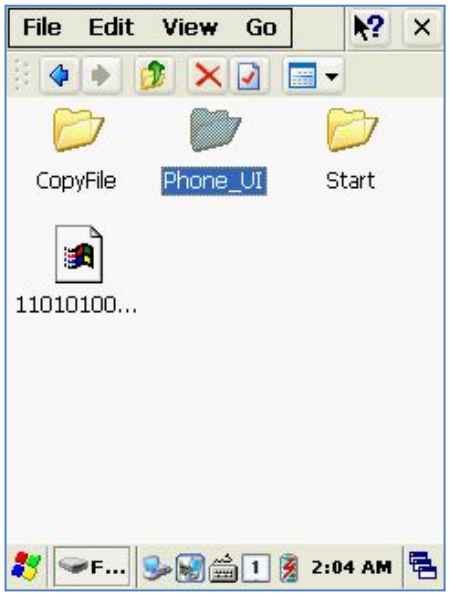
Then, RAS Connecting success

8.2 Modem Resetting

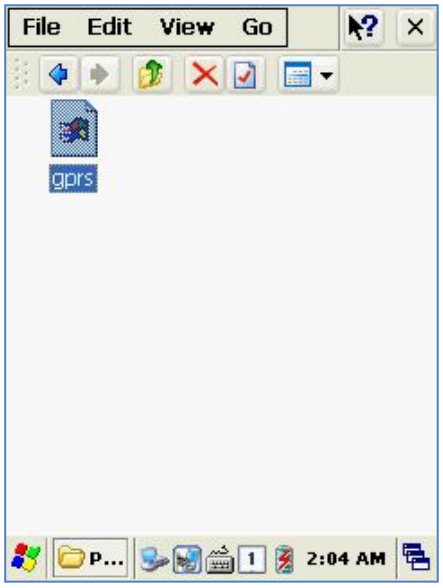
Double click Mydevice icon



Double click <Flash Disk>



Double click <Phone UI>



Delete <Gprs.ini> file

Press <Yes> button, then to resetti ng

Chapter5. Appendix

Configuration

Physical and Environmental Characteristics	
Dimension	158mm(L) X 78mm(W) X 28mm(H)
Weight	320g
Operation Temperature	-20℃ ~ 50℃
Storage Temperature	-30℃ ~ 60℃
Humidity	Non-condensing
Drop	1.5m drop to concrete
Performance Characteristics	
Processor	Marvell™ PXA320 806MHz
Operating System	Windows CE 5.0
Memory	ROM 256MB (Max. 512MB) / RAM 256MB
Display	3.5" QVGA with Backlight, TFT LCD, 240*320 Pixels, 262,144 Color
	Stylus Touch Screen Interface
Audio	Phone Receiver, Earphone Jack
Communication Port	RS-232Serial Port, USB 1.1 Client, USB 1.1 Host
Expansion Slot	1 Micro SD Slot (SDHC Support) ,1 SIM Slot / 1 SAM Slot
Keypad	31key
Notification	Vibrator, LED, Speaker
Power Supply	
Main Battery	Lithium ion 3.7V Above 2,960mAH(rechargeable), Up to 4,400mAH(Option)
Backup Battery	Lithium-ion Polymer 3.7V, 80mAH(rechargeable)
Adaptor	Input AC100V ~ 240V, Output DC5V 3A
Network Character	
Wireless Lan	WLAN(802.11 a/b/g compliant)
Bluetooth	Class Ⅱ, v2.1 EDR
GPS	Internal Antenna
Data Capture Devices	
Barcode Engine	1D Laser Scanner, 2D Image Scanner
Camera	3.0Mega Pixel with Auto Focus
UHF 900MHz Tag Reader	
Frequency	850MHz- 960Mhz (Adjustable)
Reading Range	0m ~ 7m (Differs from each tag)
Writing Range	0m ~ 3m (Differs from each tag)
Antenna Gain	2dbi (Standard)

Speed	62.5 kbps
RF Output	1W EIRP
Protocol	EPC Gen2 ISO 18000 6C / ISO 18000 6B(option)
Multi-Reading	Anti-collision

Technical support and Sale Contact

ATID Co., Ltd.

#1210 Byuksan/Gyungin Digitial Valley II, #481-10 Gasan-Dong
Gumchon-Gu, Seoul, Korea

TEL: +82-2-544-1436
FAX: +82-2-2113-0040
Homepage: http://www.atid1.com
E-mail: atid@atid1.com, webmaster@atid1.com
English: +82-70-8677-8589, +82-70-8677-8591
Chinese: +82-70-8677-8591
Japanese: +82-70-8677-8594
Korean: +82-70-8677-8594